NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

F A C T S H E E T

(pursuant to NAC 445A.236)

Permittee Name: Clark County Water Reclamation District
5857 East Flamingo Road
Las Vegas, Nevada 89122

Permit Number: NV0021563 - Renewal

Description of Discharge

Location: Laughlin Water Reclamation Facility
450 Bruce Woodbury Drive
Laughlin, Nevada 89029

The Clark County Water Reclamation District's Laughlin Water Reclamation Facility (WRF) is located in Section 14, T. 32S., R. 66E. MDB&M, on the eastward sloping pediment west of and about 100 feet in elevation above the hotel-casino row which flanks the Colorado River's western shoreline, in Laughlin, Clark County, Nevada. The Mohave Generating Station is located about a quarter of a mile south of the plant, on a bluff overlooking the Big Bend of the Colorado River. The emergency onsite land application area (reuse field), extends about one half mile west of and upgradient from the WRF.

Outfall 001 - Colorado River
Latitude: 35° 10' 03"N; Longitude: 114° 34' 11"W
Outfall 002 - emergency reuse land application field
Latitude: 35° 09' 28"N; Longitude: 114° 36' 04"W
Outfall 003 - Effluent pump station and reuse export pipeline
Latitude: 35° 09' 27"N; Longitude: 114° 36' 03"W

Characteristics: The Laughlin Water Reclamation Facility is an advanced wastewater treatment plant designed to treat domestic sewage generated by residential and commercial users including nine hotel-casinos, an inn, RV parks, a marina and park facilities within the service area to meet secondary treatment standards. The present 8.0 MGD plant has been in operation since June, 1994. Wastewater has been discharged from the facility to the Colorado River since December 1, 1994. Onsite land application for emergency effluent disposal is via a spray irrigation system. Treated effluent is also available for reuse via landscape irrigation at approved sites.

Flow: 8.0 MGD Daily maximum
Monitoring: Influent flow, Effluent flow to the Colorado River discharge diffuser (Outfall 001) and, Effluent flows to the reuse Outfalls (002 & 003) are monitored.

Influent flows characteristically fluctuate weekly and monthly depending on the seasonal tourism, the economy, and special events which the Town of Laughlin and the hotel-casino properties host. The resident population in the Town of Laughlin is about 8,100, however the resort populations in the hotel-casino properties average many times that number.

Flows for the past year have averaged about 2.33 MGD. Maximum Daily flow rate is 3.25 MGD.

Description of Facility and Discharge:

The Applicant has applied for renewal of their existing discharge permit. The facility is designed as an 8.0 million gallon per day (MGD) activated sludge process plant. The tertiary treated, nitrified and denitrified, disinfected effluent is delivered in an effluent discharge pipeline to the Colorado River for disposal via a diffuser system in the river below the Laughlin bridge. Also permitted are emergency discharges of treated effluent to the onsite land application site when river limits can not be met due to mechanical/equipment malfunction or upset. Treated effluent may also be supplied to approved reuse irrigation sites via an effluent pump station and reuse pipeline. Monitoring and sampling are required to ensure effluent quality of the surface water discharge and for the reuse application(s).

The treatment plant process consists of screening and flow equalization, denitrification in an anoxic mixed liquor zone, followed by biological treatment in an activated sludge process in up to three oxidation ditches, followed by secondary clarification. Secondary effluent receives advanced treatment by alum addition to flocculating clarifiers, filtration on automatic backwashing sand filters, followed by chlorination for disinfection for discharges; effluent is dechlorinated prior to the Colorado River discharge. Solids are treated by dissolved air flotation(DAF)thickening, centrifugation with lime stabilization, and landfill disposal.

Receiving Water Characteristics: The receiving water is the Colorado River and groundwater. The groundwater in the area is potable; some areas have manganese and TDS concentrations above drinking water standards; TDS is as high as 4,200 mg/l, but at LWRF TDS ranges from 500 to about 650 mg/L. Nitrate concentrations in the monitoring wells surrounding the pivot sites continue to slowly decline over time. Nitrate concentrations vary in different wells from about 3 to 8 mg/L at some sites, to over 20 mg/L in the area sites where historical practices (reuse and sludge applications combined)and past effluent quality are reflected in elevated concentrations. However, the most current 5-year data shows a continued gradual

decline in concentrations. It is expected that the nitrate concentrations will continue to decline over time to the expected background concentrations of 3 to 8 mg/L. Laughlin's drinking water supply is treated and provided by the Big Bend Water District; source water is the Colorado River.

Permit Monitoring: The Effluent parameters monitored are:

Outfall 001 - river discharge

$CBOD_5$ (inhibited)	Total Suspended Solids
BOD_5	Total Dissolved Solids
pH	Fecal Coliform
Un-ionized ammonia as N	Total Phosphorus as P
Ammonia as N	Nitrate as N
Kjeldahl Nitrogen as N	Nitrate + Nitrite as N
Temperature	Chlorine Residual
Dissolved Oxygen	

These parameters and limits are met at the end of the approved mixing zone 200 feet downstream of the diffuser in the river.

Outfall 002 - emergency land application irrigation site

Flow Fecal Coliform 200/400 CFU/100 ml

Outfall 003- future approved reuse sites

Flow Fecal Coliform 2.2/23 CFU/100 ml
Ammonia as N, Nitrate as N, Total Nitrogen as N

General:

Procedures for Public Comment:

The Notice of the Division's intent to reissue a permit authorizing the facility to discharge to the Waters of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Las Vegas Review-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of newspaper publication of the public notice, by January 20, 2008. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons.

The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination

The Division has made the tentative determination to reissue the proposed permit. The permit will be for a five (5) year period.

Groundwater Monitoring:

GROUNDWATER MONITORING is required in accordance with the following:

Table I.3

Parameter	Sample Max	Frequency	Monitoring Wells	Sample Type
Depth to Groundwater (ft.):	Monitor and Report	Monthly	FW-11, FW-10, FW-9, FW-8, FW-7, FW-4, FW-3, FW-2, FW-1,	Discrete
Groundwater Elevation:	Monitor and Report	Monthly	as above	Discrete
Nitrate as N mg/L:	Monitor and Report	Monthly	as above	Discrete
Total Nitrogen as N mg/L:	Monitor and Report	Monthly	as above	Discrete
Chlorides mg/L	Monitor and Report	Monthly	as above	Discrete
TDS mg/L	Monitor and Report	Monthly	as above	Discrete
Total Phosphorus as P mg/L:	Monitor and Report	Monthly	as above	Discrete
Nitrate as N mg/L	10 mg/L	Quarterly	Riverside Hotel Wells	Discrete

Notes: mg/L = milligrams per liter

Proposed Effluent Limitations, Schedule of Compliance:

See Permit. The Permittee's Pretreatment Program shall be continued, and any revisions to the EMP shall be submitted to the Division by 06.30.08.

Rationale for Permit Requirements

Monitoring is required to assess the level of treatment provided and to ensure that the river discharge meets water quality standards for the Colorado River NAC.445A.192, that standards for reuse are met, and that groundwater quality is not degraded.

Prepared by: Icyl C, Mulligan
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